

## A NEW TRIOROPHID FROM DEATH VALLEY, CALIFORNIA

(Coleoptera: Tenebrionidæ)

BY FRANK E. BLAISDELL, SR.\*

The remarkable Triorophid described below was collected in Death Valley, Inyo County, California. This valley is the sink of the Amargora River and lies east of the Panamint Range of Mountains; it is about 150 feet below sea level, and has evidently been once an extensive lake, although now a desert region—a dry, alkaline plain in summer and a mud flat in ordinary winters.

*Eschatomoxys* Blaisdell, new genus

Head subquadrate; epistoma lobed, lobe triangular and not deflexed, epistomal ridge absent; antennæ long and subfiliform, segments unusually elongate; mandibles stout, bifid at tip, each with a porrect tooth. Eyes distant from the pronotal apex, feebly convex and not more prominent than sides of frons and tempora; a supraciliary carina present. Mentum transverse and hexagonal with bristling setæ near the sides. Labrum retractile. Gula with a deep fusiform impression behind the submentum. Maxillary palpi not visible, completely retractile, or lost in the type; labial palpi small. Pronotum not margined laterally, continuously arcuate with the sides of prothorax. Prosternal intercoxal process arcuate between the coxæ. Intercoval process of abdomen moderately broad and rounded at apex; first segment with a pubescent fovea at middle in the male. Legs long and slender; femora clavate, very slender in basal one-half. Tibial spurs moderate in length and slender. Tarsi long and tenuous, sparsely spinous beneath; claws moderately long and attenuated.

Genotype: *Eschatomoxys wagneri*, new species.

The generic term refers to the unusual form of the antennæ for a member of the Tribe Triorophini. It is a marvelous addition to the known Tentyriid fauna. The species is evidently more or less subterranean in habits. It is hoped that the present study will stimulate collectors to search for other specimens and to discover the female.

*Eschatomoxys wagneri* Blaisdell, new species

Form elongate ovate, a little more than twice as long as wide, surface smooth, sculpturing feeble to more or less obsolete. Color

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piceous with a slight tinge of rufous, posterior one-half of body more evidently rufous; antennæ and legs dark rufous, labrum pale. Luster dull and finely alutaceous. Pubescence extremely sparse and extremely inconspicuous.

Head about one-sixth wider than long and quite equal to length of pronotum; neck somewhat long; equally wide across tempora, eyes and sides of frons, the latter parallel, moderately arcuate and not convergent, angles evenly and strongly rounded, thence transverse and straight to the position of the obsolete cicatrices of the oblique sutures, margin sparsely fimbriate with short hairs; epistomal lobe as in *Stibia*, but not deflexed, moderately convex; sides straight to the obtuse apex, margin irregularly serrulate. Tempora scarcely more prominent than sides of neck, the latter slightly posteriorly convergent, broadly and very feebly sinuate to become parallel. Frons broad, very feebly convex anteriorly, a little more convex on vertex, transversely arcuate and declivous laterally behind the tempora; surface feebly impressed within the supra-antennal convexities; the latter convex antero-posteriorly, and declivous against the eyes; supra-ciliary margin narrowly and abruptly vertical, obtusely carinate, carinæ extending forward and bounding the preocular impressions within. Surface finely and rather evenly punctate, punctures shallow, not well defined and separated by a distance equal to twice their diameters.

Eyes not in the least prominent, irregularly circular in outline, facets scarcely convex. Antennæ very long and not quite attaining the middle of elytra; segments two to eight inclusive very elongate, cylindrical, each briefly enlarged at apex to receive the condyle of next segment; segments nine, ten and eleven slightly wider; the first elongate, subconical and about five times as long as wide at apex; second six times as long as wide at middle, equal in length to fifth as well as to the combined lengths of ninth and tenth; fourth segment quite equal in length to sixth, seventh or eighth, and seven times as long as wide at middle; ninth obconical, and three and one-half times as long as wide at apex, about one-third of its length shorter than eighth; tenth suboblong and about three times as wide at apex as eighth at middle, one-third longer than wide at apex; eleventh fusiform, elongate, four times as long as width at middle and as long as eighth.

Pronotum widest slightly before the middle, one-third wider than long; apex a little wider than base, truncate in very moderate circular arc, not margined except feebly in lateral thirds, angles distinct and not in the least prominent. Sides broadly and feebly arcuate, slightly convergent from apex to base, not margined; viewed from the side feebly margined in apical fourth behind the angles, rendering the latter subacute. Base broadly and slightly arcuate, marginal bead rather coarse and flat, angles obtuse, rendered minutely evident by the bead. Disk transversely convex and arcuately continuous with the hypopleuræ, less so

antero-laterally, the apical angles not entirely visible when viewed from above; slightly convex antero-posteriorly and linearly impressed against the basal bead; punctate as on the frons, punctures slightly better defined.

Prothorac sides less than moderately convex, punctures larger, shallow, not well defined and a little more widely spaced; coxal convexities impunctate. Prosternal apical margin broadly and slightly emarginate, rendering the apical pronotal angles prominent and more acute, as viewed from below; punctures as on the hypopleuræ, but somewhat obliquely impressed rendering their anterior margins more prominent than the posterior; surface slightly asperate.

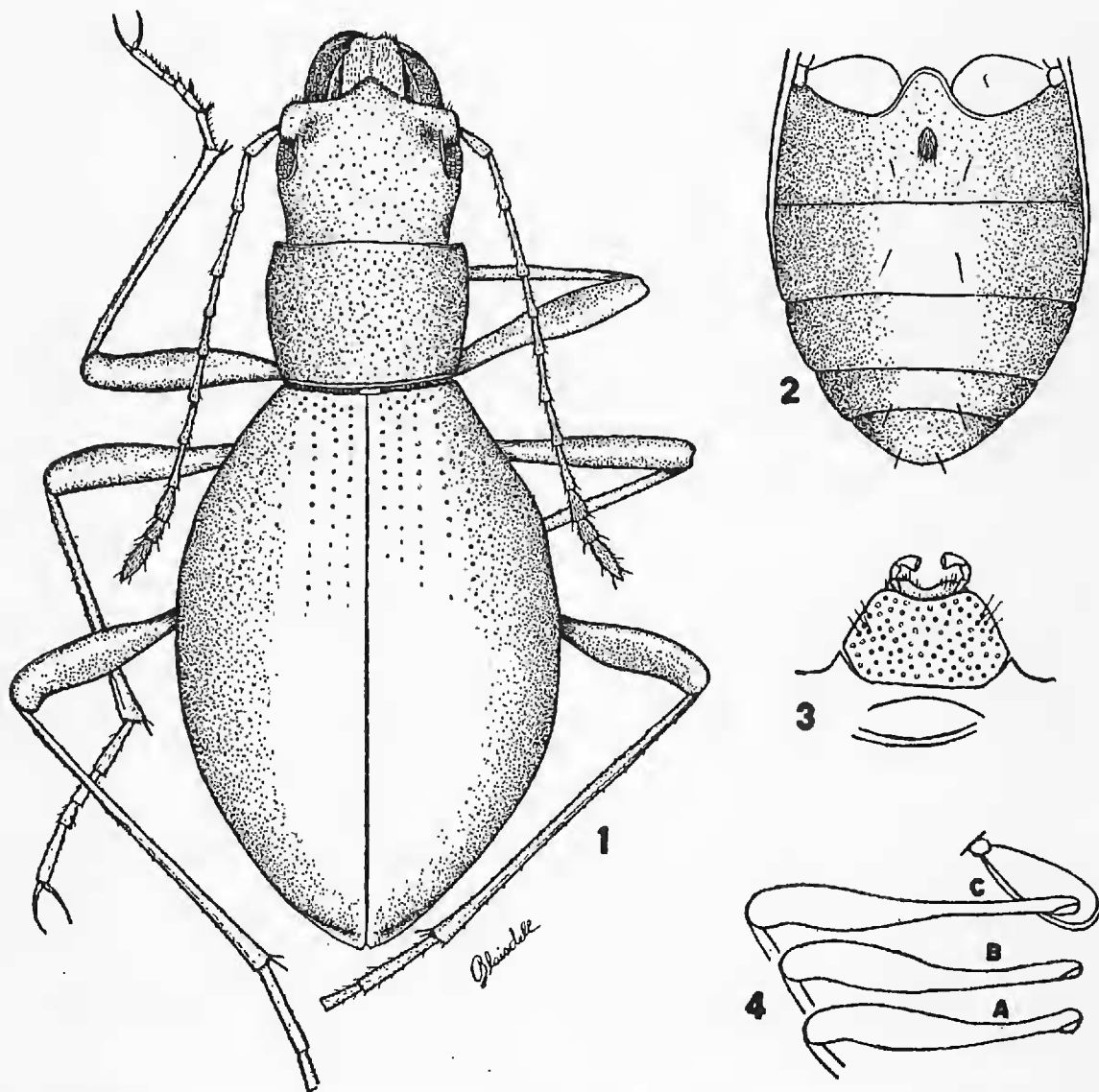
Elytra oval, widest at middle, about one-half longer than wide and nearly four times as long as the pronotum; base equal to that of the pronotum, slightly and broadly emarginate and adapted to the latter, margined, margin slightly irregular and not coarse; humeri obtuse and not in the least prominent. Sides broadly and quite strongly arcuate, more convergent in apical fourth to the obtusely ogival apex. Disk moderately strongly convex in the central area, more strongly, broadly and arcuately declivous laterally, feebly inflexed, the arcuation quite continuous with that of the abdomen; apical declivity gradual and arcuately oblique; apical submarginal impressed area narrow and not extending across the suture. Surface in basal one-fourth with very feebly indicated series of small punctures, that are most evident near base and gradually evanescent posteriorly, otherwise obsolescent.

Epipleuræ narrow, at base as wide as the metepisternum, gradually narrower toward apex; superior margin feeble and slightly irregular from the elytral submarginal punctation; inferior margins distinct but not strong; surface smooth. Mesosternum subasperate, punctures not well defined, close and moderately large. Metasternal punctures rather well defined, moderate in size and separated by a distance equal to two to four times their diameter, and there is a row of small punctures before the metacoxæ. Mesepisternal punctures large and more densely placed, those of the metepisterna small and forming an irregular row along the inner surface. Epimera impunctate, the mesepimera connate with their episternum. Metepimera suboval, as long as wide and interposed between the metacoxæ and the inferior epipleural margins.

Abdomen moderately convex, less so on first segment, impunctate; except in the vicinity of the pubescent fovea, punctures minute, each with a fine, short and inconspicuous hair; a few widely scattered and very minute setigerous punctures are discernable under high power. First segment on median line as long as second and fourth together; second about twice as long as fourth and almost one-third longer than the third.

Legs long and slender, feebly sculptured; femoral punctules very minute and sparse, each with a pale, fine, short and recumbent hair. Tibiæ slightly flattened on their outer surface with widely placed muricate points or minute spicules. Metatibiæ subequal in length to their femur; mesofemora almost one-eighth of their length longer than their tibia; profemora and their tibia quite equal in length. Tarsi slender, a mesotarsus four-fifths as long as its tibia.

Measurements: Length 9 mm.; width 4 mm.



1. *Eschatomoxys wagneri* Blais., new species. Male type.
2. Abdomen showing position of the pubescent fovea at middle of first segment, and what appears to be ambulatorial setæ.
3. Mentum and labial palpi with apex of ligula showing; behind the submentum lines indicating boundary of deep gular impression.
4. Femora showing degree of slenderness: A, profemora; B, mesofemora; C, metafemora, also a coxa separated from inferior epipleural margin by the metepimeron.

Type a male, No. 4095, a unique in the author's collection, Museum of the California Academy of Sciences. Found in Death Valley, Inyo County, California, October, 1922. Kindly given to the author by Mr. Roy L. Wagner, of Fresno, California. Unfortunately all of the tarsi are imperfect except two.

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### THREE NEW SPECIES OF CYBÆUS

BY HARRIET EXLINE

The following three species of *Cybæus* are closely related and will run to f' in the key provided by Chamberlin and Ivie<sup>1</sup> (p. 9). The chelicerae are strongly geniculate, there are 3 pairs of spines on the ventral side of tibia I and II, the opening of the epigynum is small, near the epigastric furrow, without a septum, the cephalothorax is over 3.5 mm, and the legs are annulate. These species must therefore be separated from *C. reticulatus* Simon and *C. shoshoneus* Chamberlin and Ivie, their nearest relatives. This section of the key to species of *Cybæus* may be expanded as follows:

- f'. Legs annulate.
  - g. Opening of epigynum sharply defined laterally.
    - h. No sacs visible, or if sacs show through chitin, tubes also visible.
      - i. Opening of epigynum extending anteriorly to center of plate. No definite tubes of sacs visible .....*C. olympiæ* sp. n.
      - i'. Opening of epigynum not extending anteriorly to center of plate. Tubes of epigynum appearing through chitin as two pairs of transverse thickenings.....*C. reticulatus* S.
    - h. Sacs alone visible through chitin. Two pairs of sacs arranged longitudinally.....*C. hatchi* sp. n.
  - g'. Opening of epigynum not sharply defined laterally.
    - h. Sacs of epigynum immediately anterior to opening of epigynum..... *C. shoshoneus* Ch. and I.
    - h'. Sacs of epigynum distant from opening of epigynum .....*C. chaudius* sp. n.

#### *Cybæus olympiæ* Exline, n. sp.

Female: General features typical of the genus. Posterior eyes equidistant; clypeus two times diameter of the anterior

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<sup>1</sup> Chamberlin and Ivie: North American Spiders of the Genera *Cybæus* and *Cybæina*. Bull. Univ. of Utah, vol. 23, no. 2, 1932,